

Jones, Mr. Alfred D. Chalou, and Mr. Thomas Phillips.

Visitors in the Life Academy.—New List.—Mr. Abraham Cooper, Mr. John James Chalou, Sir William Charles Ross, Mr. William Emy, and Mr. Solomon A. Hart.—Old List.—Mr. Edward Hodges Bailey, Mr. Alfred E. Chalou, Mr. R. Cook, and Mr. W. Frederick Witherington.

In the School of Painting.—New List.—Mr. J. J. Chalou, Mr. William Mulready, Mr. H. William Pickersgill, and Mr. William Frederick Witherington. Old List.—Mr. H. Peyton Briggs, Mr. Charles Robert Leslie, and Mr. Thomas Ewins.

Auditors Re-elected.—Mr. William Mulready, Mr. J. M. W. Turner, and Sir Richard Westmacott.—Times.

SOCIETY OF ARTS.

[We gave a report of this paper before, but not so fully as we could wish; we have pleasure in extracting the following from the pages of *The Mining Journal*.]

PATENT METALLIC SAND CEMENT.—On Wednesday evening last, Benjamin Rottch, Esq. V.P., F.R.S., in the chair, a highly interesting paper, by C. K. Dyer, Esq., of the firm of Benson, Logan, and Co., New Broad-street, on their Patent Metallic Sand Cement, was read by Mr. Whishaw, the secretary. The paper, after pointing out the peculiar chemical value of the metallic sand, stated that this cement had now been in extensive use upwards of ten years, without the slightest failure, except in those cases where, from the ignorance of the workmen, it had been improperly applied. The cement was composed of blue lias lime, mixed with the metallic sand, which was stated to be very similar to Italian *puzzolana*, the value of which in concrete, and in all sub-aqueous works, was undoubted, but the expense and difficulty of procuring which had prevented its extensive use. The metallic sand contained a greater proportion of iron than *puzzolana*, or any other material yet introduced to the public, and hence the indurating property which it possesses; and its granular form, and sharpness of its angles, would be admitted as an additional reason for its extraordinary tenacity. As a concrete, it was mentioned that the metallic sand had been successfully employed in the entire foundations of the new Houses of Parliament, and was used by the Metropolitan Wood Paving Company in forming the sub-stratum on which their blocks were laid, and who were so convinced of its efficiency, that they secured from the patentees the exclusive privilege of using it for such a purpose: and to the unyielding nature of their foundations may be attributed, in a great degree, the successful results which have attended the work executed by that company. As a mortar, it was admirably adapted for tunnels, sewers, sea and river walls, and inverted arches, as being impervious to damp, and increasing in hardness from atmospheric influences. As a stucco for walls, as well as for all architectural ornaments, from the agreeable tone of colour which it assumes naturally, and retains without the aid of any colouring or painting, and from its entire freedom from vegetation, it was the most perfect substitute for stone ever yet introduced, and several large and highly enriched mansions erected in the counties of Surrey, Hampshire, and Devonshire, during the last eight or nine years, coated and ornamented with the metallic sand cement, had been found, upon recent examination, free from the slightest failure. Among the mansions referred to was that of the Earl of Egremont's, Silverton Park, near Exeter, erected from the designs of James Thomas Knowles, Esq., and which was considered one of the largest and most richly decorated of the private residences of the nobility in England. In the list of specimen works in London, recently executed, were mentioned, the Alfred Life Office, in Louthbury, an extensive range of offices built by Grissell and Peto, in Coleman-street, and the joint Terminus of the South-Eastern Railway, at London-bridge, on which an observation-tower, of considerable height and exposure, was most conspicuous. It was further stated, that the cement had resisted the severity of the climate of New York without receiving the slightest injury, as also had it done the exposure to the action of the sea spray in the look-out house at Herne Bay pier, which was

stuccued with the metallic cement about nine years ago, and now bears the appearance of granite, both in hardness and colour.

In fresco painting—a matter which was at this moment exciting so much attention for decoration in the new Houses of Parliament—the metallic sand stucco had been found highly valuable; the combination of the colours with the material imparting an almost endless durability to the work, and the face of the painting might be left in the usual manner, or brought to the highest polish. It was well known that some of the finest frescoes in Italy have suffered most materially and irreversibly from damp, and the insufficiency of the walls upon which the *intima*, or outer coat, had been laid. The process of fresco painting in Munich, adopted by the Professor Hess, had been inspected by Mr. W. B. Simpson, a decorator in London, and, in his opinion, the metallic sand cement was equal, if not superior, to any substance with which he had met, from its extreme density and hardness, and its effectual resistance to the entrance of any moisture. A splendid specimen of fresco painting—a portrait of Henry VIII.—executed twelve months ago, the ground being formed of metallic cement, surrounded by a grotesque vignette border, and foliage, &c., was exhibited, and was much admired: It will be left over the mantel-piece a short time for future inspection. The colours are so brilliant, that at a distance it has somewhat the appearance of enamel.

After the paper was read, Mr. Dyer explained the nature of the cements, and described the various specimens, which were left in the society's rooms for examination. The metallic sand, formed from copper slag, consisted, it was said, principally of iron, accompanied by zinc, arsenic, and silica, and is ground and sifted to different degrees of fineness, according to the nature of the work.

Some specimens of slabs, painted and trowelled up equal to *scagliola*, were handed round, and attracted considerable attention; the cost of the different variety of marbles would depend upon the artist, as, in all cases, the wall or slab to receive the painting is considerably less expensive than any other description of cement. Some casts were upon the table, having the perfect appearance of chiselled stone, and an ornamental vase, which had been exposed to the atmospheric changes and influence for seven years, had its edges, lines of foliage, &c., as sharp and perfect as the first day it was cast.—Much conversation ensued, and the paper and specimens gave great satisfaction to the numerous body of members present.

ALTERATION OF THE CHELMSFORD GAOLS.

It is known that the committee appointed by the Court of Quarter Session, for the purpose of ascertaining and considering what alterations should be made in the gaol at Springfield, with the view of adapting it as far as practicable to the new system of discipline, have been for some time actively engaged in the inquiry. On Wednesday last, a general meeting of the body was held at the Shire Hall, there being nearly thirty magistrates present, when the question was fully discussed in all its bearings; plans were examined, estimates and calculations were entered into, and the debate and inquiry occupied the committee nearly three hours. Eventually Mr. Disney moved, and Mr. Luard seconded the following resolution:—

"That the plan marked A by Mr. Hopper, approved by Major Jebb, be adopted."

It is necessary here to explain that, by the plan referred to, it is proposed that two of the radii of the prison shall be extended and arranged on the new principle, so as to admit of about 300 prisoners being confined in them, and rendering the gaol altogether capable of holding 500. This would afford ample room for the debtors and the female prisoners, who, on this plan, are to be removed from the old gaol. The chapel, respecting which complaints were made in the inspectors' reports, is also to be enlarged and altered; and the governor's house, and also a house for the chaplain, to be erected outside, at the front of the building. The principal argument used against the adoption of this plan was the expense, which it was considered, looking to the state of the county, would be exceedingly ill-timed; and eventually the following amendment was

moved by Mr. Tower, and seconded by Mr. Gordon Rebow:—

"That this committee are of opinion that it is not advisable, in the present uncertain state of the agricultural interest, to encounter so heavy an expense as it now appears will be incurred in the gaol at Springfield, under the plan at present submitted to it, however disposed it feels to apply the system of separate confinement to the existing prisons at a more convenient season."

The committee divided upon the question, when the numbers were—

For the original resolution..... 14

For the amendment..... 8

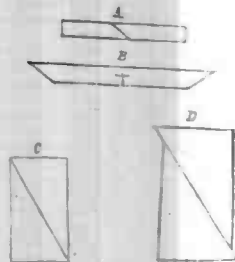
Majority 6

Consequently as far as the committee is concerned the plan alluded to was adopted, and they will now recommend it to the court at the next quarter session, when the body of the magistracy will decide upon it. The estimated cost of the alterations is stated at 30,000*l*.

PANEL PUZZLE.

TO THE EDITOR OF THE BUILDER.

Sir,—I beg to send you a rough sketch in answer to Mr. Charles Newham's puzzle in your paper of the 2nd inst.



Suppose I have a given piece of board, by cutting it as shown at A, and gluing the reverse edges together, will give an extra width as shown at B; the longer you cut your play at A the wider you may get your panel, and likewise longer. C shows the length of the panel, by cutting it from angle to angle as C, and gluing it as D, and by the panel being wider than required will give you the extra length.

With my best wishes for the success of THE BUILDERS.

I remain, yours, Sir, respectfully,

Wilmington-square. STEPHEN PALMER.

EXTENSION OF LIVERPOOL.—During the summer and autumn of the present year, new rows of houses have been begun and carried on for some distance, at four or five different places between Edge-hill and the Old Swan. They are done of them very choice specimens of architecture, but still each row will serve as a nucleus for fresh exertions; and thus, in ten or twenty years, the town of Liverpool will be carried as far as the Old Swan ridge, just as, during the last generation, it was carried from the top of Shaw's-brow and the neighbourhood of Saint Peter's Church, to Edge-hill, to the Dingle, to Kirkdale, and beyond St. Domingo House. Already the gas has been laid down upwards of a mile beyond the Old Swan, which used a few years ago to be thought a long way in the country; and it had not been for the introduction of steam-boats, which have taken between twenty and thirty thousand persons to the opposite side of the river, the population would by this time have extended in an unbroken line as far as the gas now extends.

PUBLIC WALKS.—In the year 1840, a sum of 10,000*l*. was voted by the House of Commons for "public walks," and it appears from a Parliamentary return that only 300*l*. of the sum has been expended. It is stated that 300*l*. was advanced to the Provost of Dundee for improving Magdalen-ward, and 200*l*. for improvements in the neighbourhood of Arbroath. It is added, "the remaining 9,500*l*. is still in the Exchequer."